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ABSTRACT

The global imperative is acting on the reality that people's survival, the planet's existence, and the quality of humanity requires change in the relationship between economic development and environmental redevelopment. The destructive patterns of shortsighted global economic development warrant rethinking of the link between the economy and the environment. Educators, who hold the key to competition within the global marketplace, should institutionalize the global imperative by exploring critical aspects of building a high quality work force through competency-based education and training. New ways to think about education and training allow educators to teach global citizenship within the context of global economic development. In building a curriculum for responsible global citizenship, four approaches should be examined: all economic development has environmental consequences; an economic system must generate surpluses and technical knowledge; a political system that secures effective participative decision making should be nurtured; and a production system that preserves the ecological base for development should be fostered. (NLA)

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THE GLOBAL IMPERATIVE: RETHINKING THE ECONOMY, THE ENVIRONMENT, AND EDUCATION

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presented by

Dr. Carolyn J. Lukensmeyer

June 18, 1991

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"There will come a time when our descendants will be amazed that we did not know things that are so plain to them . . . Many discoveries are reserved for the new age . . . when memory of us will have been effaced. Our globe is a sorry little affair unless it has in it something for every new age to investigate . . . Nature does not reveal her mysteries once and for all."

Seneca wrote these words on the philosophy of new age and nature during the first century. In the nearly 2,000 years since, generation after generation has peeled away at the shroud of mystery that envelopes our natural world. For the generations represented in this room today, our new age -- the age in which the mysteries of our globe were exposed to us far more tangibly than ever before -- began, I believe, less than 20 years ago. In 1962, an Ohio-born astronaut punctured the stratosphere and a human being saw our planet from space for the first time. From space, we first saw -- not the world we had come to think of as the center of the universe -- but a small and fragile ball dominated not by people and structures and geographic borders, but by a pattern of clouds, mountains and water -- shades of greens, blues and browns surrounded in a mass of deep blackness.

That vision has had a greater impact on the way we think about planet Earth, and the way our activity and behavior impacts this fragile ball, in a manner that is only now beginning to manifest into, what I label, our global imperative. Our global imperative is acting on the reality that our survival as a people, the existence of our planet, and the quality of humanity urgently requires monumental change in the scope of our thinking about the interface between economic development and environmental redevelopment. For it is only through a reshaping of our thinking that we can redirect the rise in developmental trends that our planet and its people cannot much longer bear. And, I am convinced, it is only through the world's education systems -- your system, which is the vital link between managing the world economy and the global

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environment -- can such a massive rethinking occur in time to reverse the trends that threaten to radically alter the planet and threaten the lives of many species upon it, including the human species.

I. THE CASE FOR EMBRACING THE GLOBAL IMPERATIVE

Some, perhaps many of you, may be thinking that I overstate my case. I certainly recognize that any discussion of any "threat to the human species" will be met with accusations of overstatement. One only has to consider how we tend to distance ourselves from such human species threats as AIDS or nuclear war to understand that it is human nature to disavow that which we find overwhelming.

So, I could easily spend the next hour -- the rest of today, even -- to build a reality-based case to compel you to embrace the global imperative -- to compel you to act, as educators, on that imperative. However, I come to you today with the assumption that such a case has unequivocally been made for all the world to see. I can make no case stronger that the ecological tragedy of the Exxon Valdez. Is it possible for anyone to make a case more frightening than the Chernobyl nuclear reactor explosion? Does a more compelling case exist than the leak from Union Carbide's pesticide factory and the 220,000 injured, blinded or dead victims in Bhopal, India?

These separate incidents -- among dozens more occurring in the environmentally disastrous 1980s -- do little to overstate the case that the force known as our global economy must be redirected to, not merely quell the threat to the quality of our lives, but to also perpetuate the continued growth of our global economy.

Examples abound to demonstrate that our economy, as it feeds upon the finite resources of the environment, is, quite literally, feeding upon itself to the detriment and destruction of both. Examples abound to exemplify the eradication of future economic possibilities due to present day ecological exploitation foolishly justified by short term -- and shortsighted -- economic gain. Consider that:

* Each year, another 15 million acres of productive dryland turns into economically worthless desert.

* More than 26 million acres of forest are destroyed annually. Much of this forest is converted to low-grade farmland unable to support the farmers who settle it.

- In Europe, acid precipitation kills forests and lakes and damages the artistic and architectural heritage of nations. Vast tracts of soil may have been acidified beyond reasonable hope of repair.

- The burning of fossil fuels puts into the atmosphere carbon dioxide, which is causing gradual global warming. This "greenhouse effect" may, by early next century, increase average global temperatures enough to shift agricultural production areas, raise sea levels to flood coastal cities, and disrupt national economies.

- Other industrial gases threaten to deplete the planet's protective ozone shield to such an extent that the number of human and animal cancers would rise sharply and the oceans' food chain would be disrupted. Industry and agriculture put toxic substances into the human food chain and into underground water tables beyond reach of cleansing.

The lessons of Chernobyl, Valdez, Bhopal -- combined with the destructive patterns of shortsighted global economic development -- warrant that our education system foster the rethinking of how we are to manage the link between the economy and the environment. These lessons warrant as well, a call to action for all educators to take individual and collective responsibility to institutionalize the global imperative.

II. A CALL TO ACTION: ACCEPTING THE ROLE OF "THE RESPONSIBLE GLOBAL CITIZEN"

The theme of this 1991 Mid-America CBE Conference centers on the issue of "quality preparation for global competitiveness." As participants, you are exploring critical aspects of building a quality work force through competency based education and training -- a work force capable of successfully meeting the new challenges of global competition. And this conference offers, through an impressive array of workshops and presentations, tangible ideas, techniques and strategies -- a blueprint, if you will -- to better build a quality work force that can indeed win the global competition. That's a positive goal for a conference with a positive theme.

However, more and more often I experience trepidation whenever the phrase "global competition" arises -- and as a buzz phrase for the 1990s it certainly is arising quite often. My fear is that the historic and traditional American approach to competing in the economic arena will destroy our economic and ecological future. "Victory at all

cost" cannot be considered a valid economic development theme if we hope to sustain the finite natural resources that are the foundation of that economic development. The American patriarchal syndrome that justifies that for every winner there must be a loser -- for every victory there must come a defeat -- has unnecessarily delivered us to the brink of environmental chaos. When our environment is defeated for the sake of economic development, we and future generations become the ultimate losers.

The global imperative that I bring to you today simply challenges each of us to keep sight that a responsible blueprint to achieve "quality preparation for global competiveness" must also include quality preparation for global citizenship. The global imperative challenges us to keep sight that any form of education must teach responsible global citizenship.

As educators, you clearly hold the key to America's competive ability within the global marketplace. This conference is designed to teach you how to most effectively use that key. I propose that a broader goal is for each of us to answer the call to action to teach responsible global citizenship. I ask that you choose, as educators interested and involved in shaping the building blocks of our education and training systems, to recognize the critical need to weave into present-day curriculums those theories on which responsible global citizenship are based. I am asking that you choose to be creative and committed to incorporating environmental responsibility within the present framework of what and how we teach our youth and train our work force.

I believe that as global citizens, we each hold a piece of our world's environmental future in the palms of our hands. We can shape and mold that world into any form or size that we so choose. I want to spend the remainder of my time with you offering a few new ways to think about education and training. Ways that can allow you to begin teaching responsible global citizenship within the context of global economic development.

III. BUILDING A CURRICULUM FOR RESPONSIBLE GLOBAL CITIZENSHIP

Building a curriculum to teach responsible global citizenship vis-a-vis economic development requires that we reassess our current modes of instruction and build into them options that compel students to appropriately consider environmental impact.

A. First and foremost, we must build into a global citizenship curriculum the concept that all economic development has environmental consequences.

The status quo for teaching economics focuses on the quantifiable measurements of economic growth. We teach quantity over quality. We teach "supply and demand" without teaching that much of our supply is exhaustible. We teach "return on investment" without teaching that future investment will need to increase and economic return will perpetually dwindle unless finite natural resources can be sustained and protected. To teach responsible global citizenship requires that we reformulate the way we measure economic growth. We must teach that it not only includes return on investment, supply and demand, and traditional balance sheet accounting methods, but that it must also measure the cost of less tangible factors that emphasize quality over quantity.

For example, income from forestry operations is conventionally measured in terms of the value of timber and other products extracted, minus the cost of extraction. The costs of regenerating the forest are not taken into consideration, unless money is spent on such work. Thus, figuring profits from logging rarely takes full account of the losses in future revenue incurred through degradation of the forest. Nor does it take into account the extinction of species or the erosion of top soil resulting from deforestation.

We can begin to turn the tide on deforestation and other development by-products and by-processes detrimental to our environment by teaching economics and business administrations in ways that measure the environmental cost of our development decisions.

B. Secondly, to build a global citizen curriculum, we must teach an economic system that is able to generate surpluses and technical knowledge on a self-reliant and sustainable basis.

There is a vital school of thought within the burgeoning environmental movement that serves as a reasonable response to the global imperative. It is known as "sustainable economic development" and is beginning to be explored by universities, technical colleges and primary and secondary schools as a means of incorporating environmental consciousness into the traditional ways that we teach science and technology, business, civics and political science, psychology and sociology.

Sustainable economic development, simply stated, is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Not an outlandish concept by any means, yet a concept that unequivocally repudiates the status quo of current economic development attitudes

and trends. Sustainable economic development requires stewardship, yet we teach mastery. It requires cooperation, yet we teach competition. It requires individual empowerment, yet we teach centralized control.

In essence, sustainable economic development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations.

The World Commission on Environment and Development, in its 1987 report to the United Nations entitled "Our Common Future," calls for adoption of sustainable economic development by all major actors in the development process -- by business and industry, government and our education institutions.

Sustainable development is a process that can be mastered only through incorporation throughout our education structure. I urge all educators to explore specific ways that you can incorporate sustainable economic development theory into the classroom.

C. The third approach toward building a global citizen curriculum is to teach a political system that secures effective citizen participation in decision making.

We must rethink the way we teach civics and political science so that the environment and economics are merged at all levels of decision making. As Governor Celeste's Chief of Staff for four years, I learned that the constituents our government represents are often conceptually far ahead of the officials elected to represent them relative to public policy. The disparity between public conception and political action results from a lack of understanding how to translate the common interest into legislative reform.

We currently teach how our government works. In order to teach responsible global citizenship, we must teach how to work our government. Only then can we begin to build broad based ownership of our environment and the decisions that impact its future.

I firmly believe that the public will accept far wider and more challenging responsibility for the environmental impacts of economic development decisions if taught how to participate in the political decision making process. The body politic alone can not and will not enforce the common interest -- it requires support and active involvement of informed and educated citizens.

D. The final building block of the global citizen curriculum includes teaching a production system that respects the obligations to preserve the ecological base for development. In addition, we must teach a technological system that can search continuously for new ecological solutions.

Our greatest hope for achieving sustainable economic development exists in the undeveloped and underdeveloped technology that is capable of replacing current processes that deplete. We must rethink how we teach science to emphasize the development of environmentally appropriate technologies.

Most technological research by commercial organizations is devoted to product and process innovations that have market value. Technologies are needed that produce "social good," such as improved air quality or increased product life, or that resolve problems normally outside the cost analysis of individual enterprises, such as the external costs of pollution or waste disposal.

We must also teach the risks and liabilities associated with the development of new technologies for economic gain. Risk can include the introduction of new pollutants into the atmosphere or the ecological dangers of new energy sources. Teaching environmental risk management as a component of sound decision making in the work place works to strengthen the bonds between economic development, technology and environmental responsibility.

We must teach that technogical development, as a means of alleviating stress on the environment, must take into consideration the environmental problems that are linked in a complex system of cause and effect. A technological solution to one environmental challenge will most likely impact a related challenge. For example, new processes that economically produce material to replace the need for wood can help alleviate stress on our forests. New technological processes and new synthetic materials, however, have historically create new stresses associated with disposing of material.

Technical ingenuity is our greatest hope for compatibly merging the economy and the environment, it is also our greatest threat and must be approached as an environmental dichotomy. The responsible global citizen understands and teaches that we must strive to harness the enormous power of technology in ways that contribute to sustainable economic development.

IV. CONCLUSION

Until recently, the planet was a large world in which human activities and their effects were neatly compartmentalized within nations, within sectors -- energy, agriculture, trade -- and within broad areas of concern -- environmental, economic, educational. These compartments have begun to dissolve as the planet passes through a period of dramatic growth and fundamental change. Our human world of five billion must make room in a finite environment. And the rate of environmental changes occurring is outstripping our ability to, not merely compete economically in the global marketplace, but to exist.

The onus of our global imperative lies with no one group of people. The onus lies with a global citizenry.

Clearly, the time has come to break the shackles of past patterns. Attempts to maintain ecological stability through traditional approaches to development and environmental protection will increase instability. Security must be sought through change and our best hope for change exists in the way we educate our people. You are the educators who can choose to both accept responsible global citizenship and accept the responsibility to weave it into your role as an educator.

I recognize that the themes I have covered encompass a far-reaching and broad based agenda. These themes are meant to provoke thoughts and present challenges. The status of our environment and true quality preparation for global competitiveness require that we confront these thoughts and challenges. Through such confrontation, I believe that we will begin to take the action necessary to treat appropriately the fragile ball that will allow us to exist only if we allow it to exist.

I leave you with words written over a thousand years ago by the Jewish philosopher Hillel: If not me, who? If not now, when?

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